



Yale's Horse Island Research Station incorporates timber structure and interior details that use regional wood fiber. Courtesy photo by Millie Yoshida/Gray Organschi Architecture.

Northern Forests to Timber Cities Connecting Dense Cities to Healthy Forests

In 2009, Gray Organschi Architecture (GOA) launched Northern Forests to Timber Cities, an ongoing initiative that proposes a pivot from construction practices that have long dominated North American cities: Instead of using steel or concrete, the architecture of the city might use wood harvested from sustainably managed forests.

According to Alan Organschi, principal of GOA and a senior faculty member at the Yale School of Architecture, "What started as a question about how to build affordable and sustainable housing has evolved into an approach that simultaneously addresses sustainable forest resources, primary lumber processing, forest product manufacturing, and transportation networks.

Tapping the Region's Resources

Northern Forests to Timber Cities works with the Northern Forest Center, an innovation and investment partnership across Maine, New Hampshire, Vermont, and New York. This collaboration cultivates the connection between the underused supply of New England's softwood forests and rural workforce to the region's demand for sustainable urban construction.

Organschi says, "We partner with States, like timber-rich Maine, in designing and constructing structures in urbanized areas throughout the Northeast." Organschi works with forestry colleagues to pinpoint mass timber supply sources, identifying the best tree species to harvest, and coordinating supply chains.

Sustainability Through Mass Timber

Northern Forests to Timber Cities is supported by the Hines Fund for Advanced Sustainability Research in Architecture at Yale, the Finnish Innovation Fund, and the U.S. Department of Agriculture (USDA), Forest Service Wood



340 Dixwell Avenue in New Haven, CT incorporates structural mass timber, providing high-quality sustainable urban housing. Courtesy photo by Millie Yoshida/Gray Organschi Architecture.

Innovations Grant program. A Wood Innovations grant of \$249,550 in 2018, supplemented by a contribution of \$124,775 from GOA, supported efforts to increase the use of regional wood fiber in the Northeast. Broadly, these efforts include:

- Collaborating with Yale's Schools of the Environment and Architecture and using facilities in the Yale-Meyers Forest (a 7,800-acre forest in northeastern Connecticut owned and administered by Yale to develop structural and exterior details using regional wood fiber for midrise buildings.
- Teaming with industry partners to test fabrication and postprocessing strategies to meet the emergent demand for mass timber buildings.
- Consulting with institutions and municipalities on the benefits and best practices of using regionally sourced mass timber in construction. To this end, GOA and its partners have the cooperation and support of the City of New Haven, CT to encourage the use of mass timber when developing affordable housing.

Today, regionally sourced wood materials are integrated into GOA-designed projects in New Haven. Among these is 340 Dixwell Avenue, a 60-unit, mass timber affordable housing project. Developed in collaboration with the Beulah Land Development Corporation and Spiritos Properties, the project is set to break ground in 2022. Other ventures include single-family and multiunit supportive housing projects, developed in collaboration between the Yale School of

Architecture and Columbus House of New Haven, a nonprofit housing and services provider.

"As architects, it is our responsibility to envision and design buildings that incorporate mass timber structural systems and the sustainable forestry practices and material science that underlie them. Through this, we are strengthening the relationship between healthy forests, healthier cities, and the regional economy," Organschi says.

More Information

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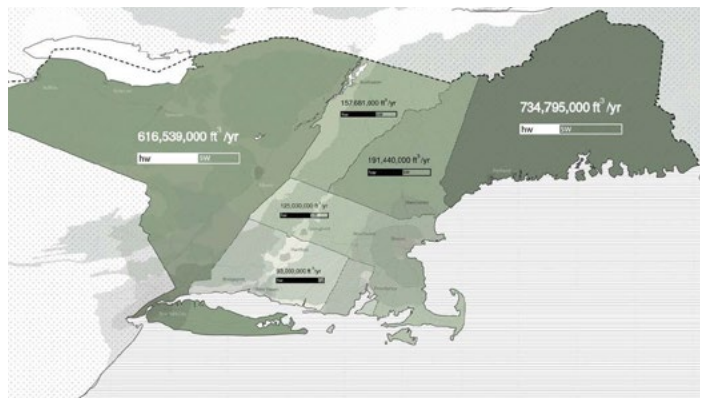
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FAST FACTS

- Initiative of Gray Organschi Architecture (GOA) to promote mass timber construction.
- Funded by the USDA Forest Service Wood Innovations Grant program, GOA, and other partners.
- Connects New England's softwood forests and rural workforce to the region's demand for sustainable urban construction.
- Gained the support of local community leaders for redevelopment using mass timber systems.



New England's vast softwood forests provide the mass timber capacity to meet the region's demand for sustainable urban construction. Courtesy photo by Millie Yoshida/Gray Organschi Architecture.